

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Appln. No.: 09/874,313
Attorney Docket No.: Q64869

REMARKS

Claims 1, 3 and 5-13 are pending in the application. Claim 1 is amended to recite “A rewritable optical recording medium”. Support can be found, for example, at page 6, lines 18-19 of the specification as originally filed. No new matter is added. Claims 2 and 4 were previously canceled.

Applicants submit that the claims are in condition for allowance, and entry of the amendment is respectfully requested along with reconsideration and review of the claims on the merits.

Rejection Under 35 U.S.C. § 103(a)

1. In Paragraph No. 4 of the Office Action, Claims 1, 3 and 5-13 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Iida et al ‘961 in view of Murray et al, “Synthesis and Characterization of Nearly Monodisperse CdE...”, J. Am. Chem. Soc., vol. 115(19), pp. 8706-8715, for the same reasons as set forth in the previous Office Action.

Further, the Examiner asserts that Applicants’ argued re-writable limitation is not recited in the claims and that the demonstration of improved sensitivity is not of the same scope as the claims. The Examiner also notes that samples 10-12 of Table 1 do not form particles in an organic matrix.

Applicants respond as follows.

Applicants amend independent Claim 1 to recite “a rewritable optical recording medium”. Applicants previously argued in the Amendment under 37 C.F.R. § 1.111 filed

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October 14, 2003, that the present invention has an object to provide a rewritable optical recording material of high sensitivity, which is different from that of Iida et al. For the Examiner's convenience, the arguments presented on October 14, 2003, are reproduced below.

Applicants respectfully submit that Claims 1, 3 and 5-13 as amended are not obvious over Iida et al '961 in view of Murray et al for the following reasons.

The object of Iida et al '961 is to obtain an optical disk capable of recording and reproduction at a high recording density. Iida et al '961 does not disclose producing a colloidal dispersion of metal chalcogenide nanoparticles, as recited in Claim 1.

Iida et al '961 discloses semiconductor particles having a particle size of from 0.1 to 50 nm, and preferably, 0.5 to 30 nm. However, Iida et al '961 does not teach or suggest the criticality of the particle size from the viewpoint of sensitivity.

Applicants submit that it is impossible to predict the effect of the particle size on the sensitivity, based on the disclosure of Iida et al '961.

Murray et al discloses a method of producing a colloidal dispersion of metal chalcogenide nanoparticles. However, Murray et al does not disclose or suggest the application of the thus obtained dispersion in a rewritable optical recording medium. Further, Murray et al is silent on the average particle diameter.

On the other hand, the object of the invention in the present application that is to provide a rewritable optical recording material of high sensitivity. As described in the specification of the present application, the recording layer formed by a nanoparticle colloid having an average

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particle diameter (particle size) from 1 to 20 nm, shows higher sensitivity (see Examples and Comparative Examples).

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a).

2. In Paragraph No. 5 of the Office Action, Claims 1, 3 and 5-13 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ichihara et al '756 in view of Ito, JP 62-270386, and Iida et al '961, further in view of Murray et al, Synthesis and Characterization of Nearly Monodisperse CdE...”, J. Am. Chem. Soc., vol. 115(19), pp. 8706-8715, and JP 62-125550, for the same reasons as set forth in the previous Office Action.

Applicants respond as follows.

Applicants respectfully submit that Claims 1, 3 and 5-13 as amended are not obvious over the cited references for the reasons as set forth above and as follows. The combination of these references fails to render obvious the present invention.

Metal chalcogenide nanoparticles are produced by sputtering in Ichihara et al. A characteristic of Ichihara et al. is that a particulate metal chalcogenide is formed in a matrix of TiO₂ or Zn-SiO₂ by cosputtering with a TiO₂ or Zn-SiO₂ target and a metal chalcogenide target. Thus, a thin film is formed as a whole (the particulate metal chalcogenide does not exist solely, but exists in the thin film), and if the thin film is crushed so as to be absorbed by a dispersing agent of Ito (JP 62-270386), the size of the crushed materials would not be so small and size seems to be several hundred nm or more, at most. In addition, the dispersing agent of Ito would

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not exist on a back side of a metal chalcogenide, but would instead exist on a matrix of TiO₂ or Zn-SiO₂. This is different from the embodiment of the present invention.

Therefore, in view of the foregoing comments, Applicants submit that the present invention is not rendered obvious by the combination of Ichihara et al. in view of Ito, Iida et al., and Murray et al.

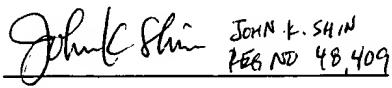
Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a).

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


John F. Shin
FEB ND 48,409
for
Fang Liu
Registration No. 51,283

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

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